

California Energy Commission

STAFF REPORT

LOCALIZED HEALTH IMPACTS REPORT

Addendum 5 for Two Projects Awarded Funding Through the
Alternative and Renewable Fuel and Vehicle Technology Program
Under Solicitation PON-13-606 – Electric Vehicle Charging
Infrastructure



CALIFORNIA
ENERGY COMMISSION
Edmund G. Brown Jr., Governor

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ADDENDUM 5

The *Localized Health Impacts (LHI) Report for Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-13-606* was posted April 11, 2014 (CEC-600-2014-002).¹ This addendum uses the same approach to assess the localized health impacts for two site locations for two electric vehicle (EV) charging stations with multiple ports. The locations are described in Table 1.

Table 1: Original and New Site Locations
Level 1 (L1), Level 2 (L2), Direct Current Fast Charger (DCFC)

Grantee and Original Site Locations	New Site Locations	Surroundings for the New Sites (within 1-mile radius)
<p>Mendocino Land Trust:</p> <p>1) Commerce Drive Cul-de-sac, Ukiah (1 DCFC, 1 L2, and 2 L1chargers)</p> <p>2) Mendocino County Fairgrounds, Boonville CA (1 DCFC, 1 L2, and 2 L1 charges)</p>	<p>Boonville Hotel, 14050 CA-128, Boonville, CA 95415 (1 DCFC, 1 L2, and 2 L1 chargers)</p>	<p>1 school, no day-care center, health-care center or hospital</p>
<p>US Green Vehicle Council (no original site location for a DCFC)</p>	<p>612 Wainright Court, Lebec, CA 93243 (1 DCFC)</p>	<p>1 health-care center, no school or day-care center</p>

Source: Energy Commission staff analysis

¹ Brecht, Patrick, Jennifer Allen, Lindsee Tanimoto. 2014. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2014-002.

Air Quality

Boonville and Lebec are both in nonattainment zones for ozone, PM^{2.5}, and PM₁₀. If a project site is in a nonattainment zone and has more than one environmental justice (EJ) indicator, as shown in Table 2, the project site is considered a high-risk community, according to the Environmental Justice Screening Method³. Boonville is considered a high-risk community, and Lebec is not.

Environmental Justice (EJ) Indicators

Table 2 shows the EJ indicators for the sites with comparisons to California. The yellow highlight shows the poverty level greater than California and where a minority group exceeds 30 percent. Boonville has two EJ indicators in addition to being located in a nonattainment zone. Lebec has no EJ indicators.

Table 2: EJ Indicators Compared With California
Yellow highlighted percentages indicate EJ indicators

	Below Poverty Level (2009 – 2013)	Black Persons (2010)	American Indian and/or Alaska Native (2010)	Asian and/or Pacific Islander (2010)	Persons of Hispanic or Latino Origin (2010)	Persons Under 5 Years of Age (2010)	Persons Over 65 Years of Age (2010)	Unemployment (April 2015)
California	15.3%	6.2%	1.0%	13.0%	37.6%	6.8%	11.4%	6.5%
EJ Indicators		>30%	>30%	>30%	>30%	>8.16%	>13.8%	
Boonville	25.7%	0.9%	1.7%	0.7%	50.2%	6.4%	12.8%	6.3%*
Lebec	7.9%	1.0%	3.1%	1.2%	26.9%	5.7%	13.5%	5.2%

Sources: Unemployment information from the State of California, Employee Development Department Labor Market Information Div.: http://www.labormarketinfo.edd.ca.gov/CES/Labor_Force_Unemployment_Data_for_Cities_and_Census_Areas.html. Demographics from: U.S. Department of Commerce, U.S. Census Bureau, <http://quickfacts.census.gov/qfd/states/06/0616378.html> and http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

2 "Particulate matter" is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled.

3 California Air Resources Board (ARB), *Air Pollution and Environmental Justice, Integrating Indicators of Cumulative Impact and Socio-Economic Vulnerability Into Regulatory Decision-Making*, 2010. (Sacramento, California) Contract authors: Manuel Pastor Jr., Ph.D., Rachel Morello-Frosch, Ph.D., and James Sadd, Ph.D.

Equivalent Gasoline Gallons Displaced

The estimated equivalent gallons of gasoline displaced based on 23.9 miles per gallon of gasoline due to electric vehicle miles traveled (VMT) are shown in Table 3. The proposed new site for the Mendocino Land Trust project has the identical equivalent gasoline gallons displaced as the original two sites for the Mendocino Land Trust project. The chargers can charge one vehicle at a time. A year is defined as 365 days.

Table 3: Estimated Equivalent Gasoline Gallons Displaced

Project Location	Chargers	Estimated Electric VMT Per Year (2016 vehicles)	Estimated Total Equivalent Gasoline Gallons Displaced Per Year
Boonville	1 L2, 2 L1s, and 1 DCFC	85,290	3,569
Lebec	1 DCFC	32,570	1,362

Source: Energy Commission staff analysis

Location Analysis and Community Impacts

Based on staff's assessment of the proposed new site locations, it is expected that the surrounding communities will not be disproportionately impacted by the implementation of the proposed projects. While overall air quality depends on several factors, the Energy Commission expects that air quality will improve over time where the chargers are proposed as they support a growing numbers of electric vehicles. As more plug-in electric vehicles enter the market and displace gasoline, tailpipe pollutants will decrease. The anticipated impact to Boonville and Lebec is likely to be positive in terms of cleaner air.